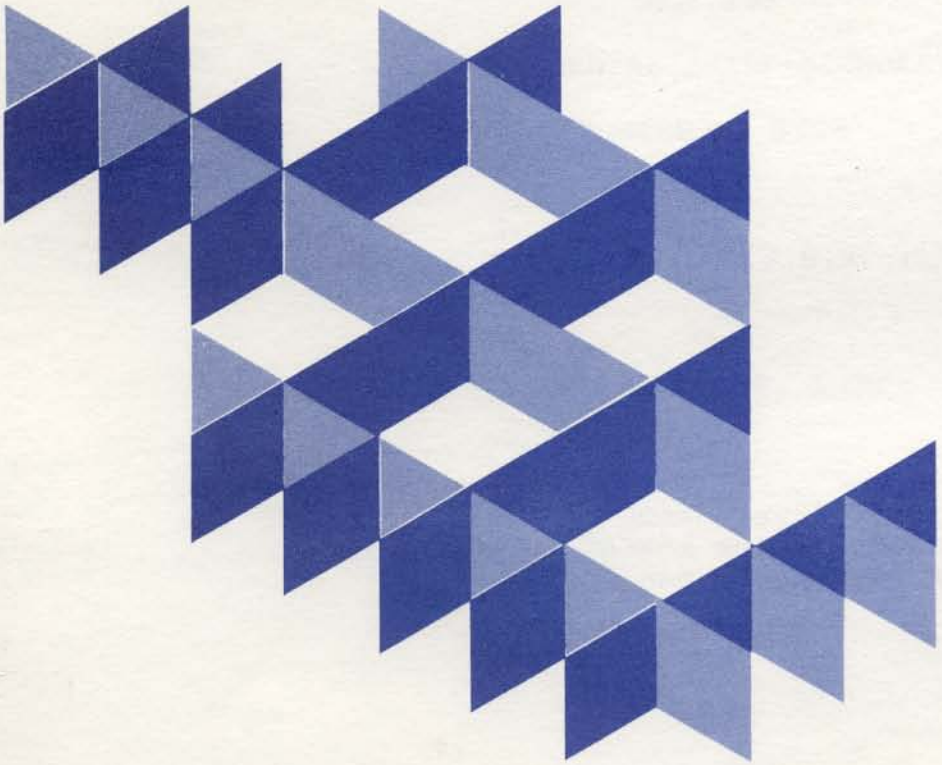
United States Department of State
Bureau of Oceans and International
Environmental and Scientific Affairs

Limits in the Seas

No. 109

CONTINENTAL SHELF BOUNDARY: TURKEY - U.S.S.R. AND STRAIGHT BASELINES: U.S.S.R. (BLACK SEA)



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LIMITS IN THE SEAS

No. 109

CONTINENTAL SHELF BOUNDARY:

TURKEY - USSR

AND

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September 29, 1988

Office of Ocean Law and Policy
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INTRODUCTION

Turkey and the USSR are the only coastal states on the Black Sea to have publicized agreements on maritime boundaries. As a consequence of a series of agreements, they have delimited their territorial sea boundary and most of their continental shelf boundary. The final section of the continental shelf boundary to the tripoint with Romania and the entire exclusive economic zone boundary remain to be negotiated. The protocol that defined the territorial sea boundary was signed on April 17, 1973, ratified by the USSR on January 3, 1974, and ratified by Turkey on May 3, 1982.[1] A Protocol delimiting this boundary was signed on September 11, 1983.

On June 23, 1978, Turkey and the USSR signed an agreement delimiting most of their continental shelf boundary in the Black Sea. Upon the exchange of instruments of ratification, on May 15, 1981, the agreement entered into force. The full texts of the 1983 territorial sea delimitation protocol, but not its technical appendices, and the 1978 continental shelf agreement are given in appendices 1 and 2.

ANALYSIS

Territorial Sea Boundary

The territorial sea boundary between Turkey and the USSR was defined by a protocol signed on April 17, 1973. Under terms of this protocol the territorial sea boundary was to begin at the terminus of their land boundary and extend northwest at a 290° azimuth to the outer limit of the territorial sea claims (12 nautical miles) of Turkey and the USSR; a joint commission was to undertake the delimitation of the territorial sea boundary. The results of this commission's work are given in the 1983 protocol. The coordinates of the terminal points of the territorial sea boundary listed in the protocol vary slightly from those given in the earlier study by the Office of The Geographer due to differences in the initial point selected, charts used, and mathematical model (shape) assumed for the earth's surface.

Nature of the Boundary. The territorial sea boundary is a single, almost 13 nautical mile (nm), geodetic line segment extending from the terminus of the Turkey-USSR land boundary, which was redemarcated between 1969 and 1973, to the outer limit of the 12 nm territorial seas claimed by both Turkey and the USSR.[2] The geodetic character of the line segment can be deduced because a rhumb line with the same terminal points has a slightly smaller azimuth than that required under terms of the 1973 protocol and

[1] The text of the 1973 territorial sea boundary protocol was printed in US Department of State, Office of The Geographer, "Territorial Sea Boundary: Soviet Union-Turkey," Limits in the Seas (LIS) No. 59, October 9, 1974. The delimitation coordinates given in the 1983 protocol are at slight variance with the analysis in LIS 59.

[2] Turkey claims a 12nm territorial sea in the Mediterranean and Black Seas, but a 6nm territorial sea in the Aegean Sea.

reiterated in the 1983 delimitation protocol (290°00'00"). A geodetic line with the terminal points listed in the 1983 protocol fulfills the azimuthal requirement.[3]

A geodetic line also best fulfills the term "straight line," which is used in the 1980 Protocol. A rhumb line, though appearing as a straight line on a Mercator map, is a spiral on the surface of the earth, whereas a geodetic line is the shortest--and therefore straightest--line between two points on a mathematically-defined spheroid surface, such as the surface of the earth.

Depiction. The territorial sea boundary was depicted on maps reprinted with the 1983 protocol and technical appendices in the Turkish gazette.[4] The protocol explicitly states that calculations were done on the Turkish system of coordinates using a Gauss-Krüger (transverse Mercator) projection and Hayford ellipsoid. The territorial sea boundary is depicted on the attached chart, based on British Admiralty chart 2214 which also depicts the continental shelf boundary.

Continental Shelf Boundary

The continental shelf delimitation between Turkey and the USSR divides all of the Black Sea seabed east of the 32° meridian of east longitude--64% of the 122,000 square nautical mile (sq. nm), California-sized area of the Black Sea.[5] Turkey obtained 45% of the area east of the 32°E (approximately 35,000 sq. nm); the USSR got 55% (approximately 43,000 sq. nm). This boundary traverses sections of the Black Sea where the depth exceeds 2,000 meters. Although oil and gas have been discovered in the Black Sea, in relatively shallow waters west of the Crimean Peninsula, there have been no reports of such resources in the area of the continental shelf boundary.

Nature of the Boundary. The 1978 protocol cites equity as the governing principle in the Turkish-Soviet continental shelf delimitation. Although equity can be implemented by methods other than equidistance, the coordinates listed constitute a simplified equidistant line between the respective coasts to the 32°E meridian. This 440 nm boundary follows a westerly course and consists of 12 line segments and 13 turning/terminal points. The line segments average 40 nm in length. The accompanying table summarizes the distances between the boundary points and the distances from these points to the nearest points on the respective coasts.[6] The initial point of the continental shelf boundary does not coincide with the seaward-most point

[3] The azimuth of the rhumb line connecting the designated points is 289°54.6' from north measured on a Mercator grid. The azimuth of a geodetic line connecting the designated points equals 290°00.0' from north measured on an International Ellipsoid, which closely approximates the Hayford Ellipsoid cited in the Protocol. For a detailed discussion of the properties of these lines, see Robert D. Hodgson and E. John Cooper, "The Technical Delimitation of a Modern Equidistant Boundary," Ocean Development and International Law Journal 3 (1976): 378-380.

[4] T. C. Resmî Gazete issue no. 17749, July 9, 1982.

[5] This figure includes the 12-nm territorial sea belt along the respective coasts.

[6] These distance measurements are calculated along geodetic line segments and may vary from those measured using other techniques.

on the territorial sea boundary. There is a gap of about 197 meters between the two boundary points.

The USSR claimed straight baselines for its Black Sea coast in 1985 and Turkey in 1964. Turkey, however, has claimed no straight baselines in the Black Sea. [See later discussion of the Soviet Black Sea straight baselines]. Analysis of the continental shelf boundary points indicates no discernible effect of any straight baseline systems on the course of the boundary.

Tripoint with Romania. The 1978 protocol between Turkey and the USSR appears to designate the tripoint with Romania (43°26'59"N, 31°20'48"E) without the formal, public concurrence of the Romanian government. Such tripoints are usually the subject of a trilateral agreement; or the bilateral agreement stops short of indicating the probable tripoint and merely indicates the general course of the final segments of the bilateral boundary, subject to agreement on the tripoint.[7]

This "tripoint" is 29.3 nm from point 12 in the Turkey-USSR continental shelf boundary, 110.8 nm from the nearest USSR point (Mys Khersones), 111.6 nm from the Turkish coast (Dikili Burnu), 110.8 nm from Romanian territory (Insula Sakalin), and 119.9 nm from the Bulgarian coast (Nos Shabla). Again, distances may vary slightly if measured using other charts.

[7] An example of such a trilateral agreement is found among India, Indonesia, and Thailand (see U.S. Department of State, "Continental Shelf Boundaries: India-Indonesia-Thailand," Limits in the Seas No. 93). An example of a bilateral agreement that stops short of the tripoint is that between Burma and Thailand (see U.S. Department of State, "Maritime Boundary" Burma-Thailand," Limits in the Seas No. 102).

Turkey - USSR
Continental Shelf Boundary

Turning/Terminal Point	Distance Between[2] Boundary Pts. (nm)	Nearest Turkish[3] Territory	Distance Land to[2] Boundary Pt. (nm)	Nearest USSR[3] Territory
Territorial sea terminus	0.1			
1	33.8	Kopmus Burun	12.0/12.9	Near Gonio
2	12.6	West of Peronit Burnu	44.3/44.7	Near Poti
3	27.8	West of Pazar	54.0/54.8	Inguri River bank
4	38.6	Fener Burnu	63.9/65.2	Mys Pitsunda
5	21.4	Kale Burnu	75.1/76.4	Mys Kostantinovskiy
6	87.4	Kara Burun	84.0/85.5	Mzymta River bank
7	32.7	Bafra Burnu	94.8/94.6	Mys Indukopas
8	29.5	Sinop Burnu	93.9/94.3	South of Mys Utrish
9	58.3	Baskaya Burnu	83.0/83.9	Mys Meganom
10	26.5	Near Abana	72.2/73.3	Near Alupka
11	71.4	Near Kerempe Burnu	70.8/71.5	Mys Sarych
12		Near Deliklisile Burnu	95.0/94.9	Mys Feolent
Total	440.1			
Mean	40.0			

1. The terminal point of the territorial sea boundary is 41°35'43.41"N, 41°16'40.88"E.
2. Distances may vary from other calculations, which do not use US charts.
3. "Burnu, burun": Turkish word for "cape, point"; Mys": Russian word for "cape, point."

Depiction. The Turkey-USSR continental shelf boundary is depicted on the attached map. For ease of construction, the connecting line segments are shown as straight line segments on this Mercator projection (i.e., rhumb lines), however the actual nature of the connecting line segments is not defined in the text nor is it clear from the official map.

The boundary line is depicted on the official map, which was annexed to the original agreement. This map appears to be a composite of two Soviet charts that are joined along the 33°50' east meridian of longitude.[8] This composite map is overprinted in Turkish: "T.C. Ile S.S.C.B Karadeniz Kita Sahanligi Sinir Haritasi," with the scale of 1:2,000,000 at 44°, dated 22/6/1978, and with the number 6773 in the lower right corner. Neither the Russian legends nor the Turkish overprinting on the official map indicate the map projection. Because its component parts were produced by the Soviet Administration of Navigation and Oceanography it is probably a Mercator projection. Neither the ellipsoid nor datum is indicated on the official map.

The text of the continental shelf agreement does not define the type of line segments to be used in connecting the designated coastal points. The geodetic system used for determining the exact location of the boundary points is not given--unlike the 1983 territorial sea delimitation protocol, which cited the Turkish system. The 1978 protocol merely states that "All geographic coordinates referred to in this Agreement are shown on the coordinate system of these charts." Because Soviet charts do not specify the geodetic system used, the reference system for precisely locating the delimitation points remains unclear.

General Observations

The 1973 territorial sea boundary agreement defined the boundary, and the subsequent protocol-description (1980) delimited the boundary with a high degree of precision, provided practical navigational aids in the vicinity of the boundary, and established the modalities for cooperation in the maintenance of the aids. The same cannot be said for the 1978 continental shelf protocol.

The Turkey-USSR continental shelf agreement does not address the potential problem of transboundary hydrocarbon deposits, nor is any dispute settlement mechanism prescribed.[9] Unlike the 1973 territorial sea boundary agreement, no further delimitation or commission is indicated for the continental shelf boundary. The reference system for precisely locating the boundary points is, apparently, lacking and the nature of the connecting line segments is ambiguous. Any offshore hydrocarbon exploration in the

[8] USSR, Ministry of Defense, Chief Administration of Navigation and Oceanography, "Zapadnaya Chast' Chernogo Morya," chart no. 500 (1977), 1:750,000 at 44°, and "Vostochnaya Chast' Chernogo Morya," chart no. 501 (1976), 1:750,000 at 44°.

[9] Treaty articles addressing transboundary deposits and dispute settlement mechanisms are found in many recent continental shelf agreements. See, for example, U.S. Department of State, "Continental Shelf Boundary: Greece-Italy," Limits in the Seas No. 96, and "Continental Shelf Boundaries: India-Indonesia- Thailand," Limits in the Seas No. 93.

vicinity of the continental shelf boundary may be made more difficult because of these factors.

Within the Black Sea, in addition to the western extensions of the Turkey-USSR boundary, continental shelf agreements remain to be negotiated between Turkey and Bulgaria, Turkey and Romania, and the USSR and Romania. To date, no exclusive zone boundaries have been publicized.

Soviet Straight Baselines Claim

By a January 15, 1985, Declaration by the Council of Ministers the Soviet Union claimed straight baselines off its continental coasts and islands of the Arctic Ocean, and off its coasts on the Baltic and Black Seas. The Black Sea straight baseline segments are illustrated on the attached map and listed in appendix 3. Twenty-five baseline segments have been claimed ranging in length from 1.1 nm to 27.2 nm with the mean length of 10.8 nm (see appendix 4 for a listing of baseline lengths). Of these segments about half do not appear to meet international legal criteria for drawing such baselines.[10]

Article 7 of the 1982 United Nations Convention on the Law of the Sea, which is similar to Article 4 of the 1958 Convention on the Territorial Sea and the Contiguous Zone, allows a country to employ straight baselines only in certain geographical situations. Paragraph 1 of this article is the paramount paragraph:

> In localities where the coastline is deeply indented and cut into, or if there is a fringe of islands along the coast in its immediate vicinity, the method of straight baselines joining appropriate points may be employed in drawing the baseline from which the breadth of the territorial sea is measured.

Point 1 is situated in the Danube delta, but is not located on land. Instead, point 1 is situated at the intersection of what the Soviets call the Soviet-Romanian maritime boundary and a line connecting the eastern extremity of the northern pier of the Sulinskiy Canal (Romania) to the eastern islet of the Tsyganki Islands (USSR). The LOS Convention does not address the use of geographic features of two states to justify the location of a baseline terminus where the terminus itself is not anchored to a piece of territory. There is some state practice to support this technique, including the practice of the Nordic states of Finland, Norway, and Sweden. However, here segment 1-2 encloses a portion of the coast neither deeply indented nor fringed with islands. Hence, the segment does not appear justifiable, even if point 1 were sited on land.

Segment 2-3 continues along the Danube delta. Segments 3-4, 5-6, and 7-8 all define juridical bays. Segment 9-10 in the Perekop Gulf represents a fall-back line of an over-large bay to the maximum-allowable closing line length of 24 nm for a juridical bay.

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[10] The analysis for these baselines is based on charts with scales ranging from 1:500,000 to 1:1,200,000 and U.S. Department of State, Office of Ocean Law and Policy, Limits in the Seas No. 106, "Developing Standard Guidelines for Evaluating Straight Baselines," August 31, 1987.

Segment 11-12, itself not justified, encloses two small juridical bays and has no practical effect on the territorial sea limit.

The next four straight baseline segments (13-14, 15-16, 17-18, and 18-19) along the west and southwest coast of Crimea are situated along a part of the coast that does not meet the geographical criteria. In each case, however, there is minimal effect on the territorial sea delimitation. Segments 15-16 and 17-18 do extend the outer limit of the territorial sea by about 4 nm.

The next eight segments (20-21, 21-22, 22-23, 23-24, 25-26, 26-27, 28-29, and 30-31) situated along the south and southeast Crimean coast are not justified as they enclose only slight curvatures in the coast that do not meet even juridical bay standards. Segment 30-31 extends the territorial sea limit by about 2 nm. Segment 31-32, at the entrance to Feodosiyskiy Bay, may meet the criteria for enclosing a juridical bay.

The next two baseline segments (33-34 and 34-35) are unwarranted because they are situated along a relatively smooth coastline that has no fringing islands. Segment 35-36 closes a body of water that leads to the Sea of Azov. Finally, segments 37-38 and 39-40 enclose two small juridical bays.

Overall, it appears that only 9 of the 25 baseline segments are drawn in areas that meet the geographical criteria set forth in the LOS Convention. For the most part, the other segments are drawn along coastlines that are either smooth or that have slight curvatures. However, those baselines not meeting the appropriate standards generally have minimal effect on the outer limit of the territorial sea.

APPENDIX 1:
PROTOCOL-DESCRIPTION
OF THE COURSE OF THE SOVIET-TURKISH SEA BOUNDARY LINE
BETWEEN THE TERRITORIAL SEAS OF
THE UNION OF SOVIET SOCIALIST REPUBLICS AND
THE REPUBLIC OF TURKEY IN THE BLACK SEA[11]

The sea boundary line between Soviet and Turkish territorial seas in the Black Sea is defined by the Protocol between the Government of the Union of Soviet Socialist Republics and the Government of the Republic of Turkey, of April 17, 1973.

The Joint Soviet-Turkish Commission on Delimiting the Sea Boundary (hereinafter called Joint Commission), formed in accordance with the Soviet-Turkish Protocol of April 17, 1973, conducted work in 1975-80 on delimiting the Soviet-Turkish sea boundary line and drew up this Protocol-Description of the course of the Soviet-Turkish sea boundary line between the territorial seas of the Union of Soviet Socialist Republics and the Republic of Turkey in the Black Sea, with appendices thereto.

The Joint Commission was composed of delegations appointed by the governments of the Union of Soviet Socialist Republics and the Republic of Turkey.

[delegation lists follow]

The following were the result of the work done and the documents compiled on delimiting the sea boundary line:

-- Protocol between the Government of the Union of Soviet Socialist Republics and the Government of the Republic of Turkey to Delimit the Sea Boundary Line between Soviet and Turkish Territorial Seas in the Black Sea, of April 17, 1973.

-- Protocol No. 15 of the meeting of the Joint Soviet-Turkish Commission on Delimiting the Sea Boundary, of December 13, 1976, which contains a decision to distribute the work between the Parties on the design and construction of range marks with lighting (beacon) equipment and also to emplace a sea spar buoy.

All work connected with defining the sea boundary line at a locality was carried out in accordance with the aforementioned protocols, as well as with other documents and instructions approved by the Joint Commission, including:

1. Work Regulations of the Joint Soviet-Turkish Commission on Delimiting the Sea Boundary.

[11] Translated by the US Department of State from the Russian text published in T. C. Resmî Gazete [official Turkish gazette], issue no. 17749, July 9, 1982.

2. Decision of the Joint Soviet-Turkish Commission on Delimiting the Sea Boundary regarding the crossing of the Soviet-Turkish boundary by personnel of both countries, engaged in work on defining the sea boundary.

3. Decision of the Joint Soviet-Turkish Commission on Delimiting the Sea Boundary regarding the calculation of the geographic and rectangular coordinates of points which define the sea boundary line.

4. Instructions on the tasks of technical working groups formed to define the sea boundary line between Soviet and Turkish territorial seas in the Black Sea.

5. Instructions on the design and construction of range marks and a sea spar buoy which define the sea boundary line between the territorial seas of the Union of Soviet Socialist Republics and the Republic of Turkey in the Black Sea.

6. Decision of the Joint Soviet-Turkish Commission on Delimiting the Sea Boundary regarding the question of the nature of delimiting the sea boundary between Soviet and Turkish territorial seas in the Black Sea.

7. Instructions on compiling, drawing up and publishing a map of the sea boundary between the territorial seas of the Union of Soviet Socialist Republics and the Republic of Turkey in the Black Sea.

8. Technical design of the rear range mark and design of the lighting (beacon) equipment, prepared by the Soviet delegation.

9. Decision by the Joint Soviet-Turkish Commission on Delimiting the Sea Boundary regarding the question of the title, form and content of the main document on delimiting the sea boundary line between Soviet and Turkish territorial seas in the Black Sea.

10. Instructions on the topographical surveying of the boundary zone of the Soviet-Turkish boundary in the region where the range marks are located.

11. Technical design of the front range mark and design of the lighting (beacon) equipment, prepared by the Turkish delegation.

The sea boundary line between Soviet and Turkish territorial seas in the Black Sea is defined at the locality of two leading marks and one sea spar buoy in the sea.

In order to construct range marks, install a sea spar buoy, mutually monitor that construction and installation, as well as make a topographical survey of the boundary zone in the region where the range marks are located, the Sides each had to form a technical working group.

The topographical and research work carried out at the locality that is related to the construction of the front range mark located on the territory of the Republic of Turkey, the design and construction of that mark, the manufacture of the lighting (beacon) equipment and its installation on the front range mark were carried out by the Turkish Side.

The topographical and research work carried out at the locality that is related to the construction of the rear range mark located on the territory of the Union of Soviet Socialist Republics, the design and construction of that sign, the manufacture of the lighting (beacon) equipment and its installation were carried out by the Soviet Side.

The research work at sea to determine the site of the sea spar buoy was carried out jointly by the Soviet and Turkish Sides. The manufacture and installation of the sea spar buoy in the sea were carried out by the Soviet Side.

The geodetic work on defining the rectangular coordinates of the centers of the front and rear range marks was carried out by Soviet and Turkish specialists from geodetic points of the joint triangular network created during the redemarcation of the Soviet-Turkish boundary in 1969-1973. Calculation of the rectangular coordinates of the centers of the front and rear range marks, as well as the installation point of the sea spar buoy and the terminal point of the sea boundary line were done under the Turkish system of coordinates, under the Gauss-Krüger projection on the Hayford ellipsoid in the coordinated zone with axial meridian L_o--42°. The elevations indicated in the documents were calculated on the mean level of the Black Sea.

The map of the sea boundary between the territorial waters of the Union of Soviet Socialist Republics and the Republic of Turkey in the Black Sea is compiled on a scale of 1:100,000.

Moreover, the topographic plan was compiled of the border zone of the Soviet-Turkish boundary in the region where the range marks are located, on a scale of 1:5,000.

With respect to the range marks which define the sea boundary line, the following documents have been compiled: protocol of the front range mark, protocol of the rear range mark, rough sketch-diagram on a scale of 1:2,500, and protocol of the sea spar buoy.

A map, plan, and rough sketch-diagram were compiled by each side independently in its own language in accordance with instructions approved by the Joint Soviet-Turkish Commission on Delimiting the Sea Boundary.

The initial point of the sea boundary line between the territorial waters of the Union of Soviet Socialist Republics and the Republic of Turkey in the Black Sea is the final point of the Soviet-Turkish state land boundary, defined during the redemarcation of the boundary in 1969-1973.

In accordance with documents of the border redemarcation of December 29, 1973, this point is located at the place where the shoreline of the Black Sea intersects with the continuation of the perpendicular dropped from the center of the special boundary mark, which is located on the land boundary line, onto the direct line uniting the Soviet and Turkish column of the main boundary mark No. 450.

The geographic and rectangular coordinates of the initial point of the sea boundary line are as follows:

latitude = 41°31'18.39" longitude = 41°32'55.06"
X = 4,596,860.80 Y = 462,337.80

From the point indicated above, the Soviet-Turkish sea boundary line between the territorial waters of the Union of Soviet Socialist Republics and the Republic of Turkey passes along a straight line in a northwesterly direction along the 290° azimuth, and approaches the final point of the Soviet-Turkish sea boundary line at a point that intersects the external boundary of the territorial seas of the Union of Soviet Socialist Republics and the Republic of Turkey.

The final point of the sea boundary line between the U.S.S.R. and Turkey in the Black Sea is defined as the point where the 12-mile boundary of Soviet and Turkish territorial seas, formed by arcs drawn at a distance of 12 miles from the Soviet and Turkish coasts, intersects the boundary line between the territorial seas, passing along the 290°00'00" azimuth.

The geographic and rectangular coordinates of the final point of the sea boundary line are as follows:

latitude = 41°35'43.41" longitude = 41°16'40.88"
X = 4,605,187.44 Y = 439,827.34

The length of the sea boundary line between Soviet and Turkish territorial seas equals 12.96 nautical miles (24.01 km).

A sea spar buoy is emplaced in order to define the sea boundary line near the coast at a distance of 400 meters from the center of the front range mark.

The range marks built on the extension of the sea boundary line on the territory of the Union of Soviet Socialist Republics and the Republic of Turkey are located at a distance of 288.50 meters from one another and are situated as follows: the front range mark in the region of main boundary mark No. 450, and the rear range mark in the region of main boundary mark No. 448.

The range marks provide shields for daytime visibility and for the lighting (beacon) equipment, and are counted on to ensure daytime and nighttime visibility during good atmospheric conditions all along the sea boundary line.

At night the direction of the sea boundary line is defined by combining the light of the rear range mark with the white light of the central light sector of the front range mark along the vertical line.

The lighting (beacon) equipment of the front range mark is equipped with a red and green light filter, each having a lighting sector of 10°. The red light warns vessels approaching from the Turkish side, and the green light warns vessels approaching from the Soviet side that they are nearing the boundary line.

Two lateral white lights of the lighting sector of the front range mark point out to the vessels the location of that sign.

In terms of locality, the distance between range marks is slight (288.50 m). Therefore the range marks will be seen as overlapping at a certain distance on both sides from the sea boundary line. In the middle of the boundary this distance is approximately 150 meters, while at the end of the boundary it is approximately 550 meters to each side of the sea boundary line.

The sides have agreed that vessels belonging to the other side should not be delayed in that sector on both sides of the sea boundary line where the range marks are seen as overlapping.

The Appendices to this Protocol-Description are as follows:

-- Map of the sea boundary between the territorial seas of the Union of Soviet Socialist Republics and the Republic of Turkey in the Black Sea, on a scale of 1:100,000;

-- Topographical plan of the border zone of the Soviet-Turkish boundary in the region where the range marks are located, on a scale of 1:5,000;

-- Protocol of the front range mark installed at the locality in order to define the Soviet-Turkish sea boundary line between the territorial waters of the Union of Soviet Socialist Republics and the Republic of Turkey in the Black Sea;

-- Sketch of the front range mark;

-- Description of the lighting (beacon) equipment installed on the front range mark;

-- Protocol of the rear range mark installed at the locality in order to define the Soviet-Turkish sea boundary line between the territorial seas of the Union of Soviet Socialist Republics and the Republic of Turkey in the Black Sea;

-- Sketch of the rear range mark;

-- Description of the lighting (beacon) equipment installed on the rear range mark;

-- Rough sketch of the site of the range marks;

-- Protocol of the sea spar buoy placed in the sea in order to define the Soviet-Turkish sea boundary line between the territorial seas of the Union of Soviet Socialist Republics and the Republic of Turkey in the Black Sea,

-- Sketch of the sea spar buoy;

-- Description of the sea spar buoy;

-- Diagram of the lighting sectors of the front and rear range marks;

-- Instructions on monitoring, withdrawing, repairing and restoring front and rear range marks and the sea spar buoy, which define the sea boundary line between the territorial seas of the Union of Soviet Socialist Republics and the Republic of Turkey in the Black Sea.

This Protocol-Description, with all appendices thereto, will be subject to approval in accordance with the laws of each Contracting Party, and will enter into force on the date of the exchange of notes notifying of its approval by both Parties.

Done in Tbilisi this 11th day of September, 1980, in duplicate, in the Russian and Turkish languages, both texts being equally authentic.

JOINT SOVIET-TURKISH COMMISSION ON
DELIMITING THE SEA BOUNDARY

Chairman of The Soviet Delegation	Chairman of The Turkish Delegation
(signed) Ambassador P.S. Kuznetsov	(signed) Ambassador Asaf Inkhan

APPENDIX 2:

AGREEMENT BETWEEN THE GOVERNMENT OF THE REPUBLIC OF TURKEY AND THE GOVERNMENT OF THE UNION OF SOVIET SOCIALIST REPUBLICS ON THE DELIMITATION OF THE CONTINENTAL SHELF BETWEEN THE REPUBLIC OF TURKEY AND THE UNION OF SOVIET SOCIALIST REPUBLICS IN THE BLACK SEA[12]

The Government of the Republic of Turkey and the Government of the Union of the Soviet Socialist Republics, guided by the desire to extend and expand the relations of good neighbors and friendly cooperation existing between the Republic of Turkey and the Union of Soviet Socialist Republics, desiring to establish a boundary between the relevant regions of the continental shelf in the Black Sea, over which the Republic of Turkey and the Union of Soviet Socialist Republics enjoy sovereign rights, in accordance with international law, to explore and develop the natural resources of the continental shelf, agreeing to delimit the continental shelf in the Black Sea, based on the principles of equity, taking into consideration the relevant principles and norms of international law, have agreed on the following.

ARTICLE 1

The boundary of the continental shelf between the Republic of Turkey and the Union of Soviet Socialist Republics in the Black Sea is the line that begins on the final point of the sea boundary line between the territorial seas of Turkey and the Soviet Union in the Black Sea as established by a Protocol between the Government of the Republic of Turkey and the Government of the Union of Soviet Socialist Republics on Determining the Sea Boundary Line between the Territorial Seas of Turkey and the Soviet Union in the Black Sea, of April 17, 1973. This line proceeds in general in a westerly direction through points, the geographic coordinates of which are as follows:

41°35'41" north latitude and 41°16'33" east longitude,
41°57'00" north latitude and 40°41'33" east longitude,
42°01'52" north latitude and 40°26'00" east longitude,
42°08'21" north latitude and 39°49'37" east longitude,
42°20'15" north latitude and 39°00'13" east longitude,
42°25'28" north latitude and 38°32'10" east longitude,
43°10'55" north latitude and 36°50'42" east longitude,
43°26'04" north latitude and 36°10'57" east longitude,
43°26'08" north latitude and 35°30'25" east longitude,
43°11'17" north latitude and 34°13'10" east longitude,
43°11'50" north latitude and 33°36'56" east longitude,

[12] Translated by the US Department of State from the Russian text published in T. C. Resmî Gazete [official Turkish gazette], issue no. 17226, January 20, 1981.

43°20'43" north latitude and 32°00'00" east longitude.

The Contracting Parties agree that when this agreement is concluded, the delimitation line of the continental shelf between the Republic of Turkey and the Union of Soviet Socialist Republics will be defined up to the point with the following coordinates: 43°20'43" north latitude and 32°00'00" east longitude. As for settling the question of drawing the delimitation line of the continental shelf further to the west between geographic point 43°20'43" north latitude and 32°00'00" east longitude, and geographic point 43°26'59" north latitude and 31°20'48" east longitude, the Parties have agreed that such settlement will be carried out later during subsequent negotiations which will be held at a suitable time.

ARTICLE 2

The boundary line of the continental shelf between the Republic of Turkey and the Union of Soviet Socialist Republics, referred to in Article 1 of this Agreement, is depicted on the attached maritime charts No. 500 published in 1977 and No. 501 published in 1976, which constitute integral parts of this Agreement.

All geographic coordinates referred to in this Agreement are shown on the coordinate system of these charts.

ARTICLE 3

This Agreement will be certified at the Secretariat of the United Nations in accordance with Article 102 of the United Nations Charter.

ARTICLE 4

This Agreement will be subject to ratification and will enter into force on the date of the exchange of instruments of ratification. The exchange of instruments will be carried out in Ankara as soon as possible.

Done in Moscow on June 23, 1978, in duplicate, in the Turkish and Russian languages, both texts being equally authentic.

For the Government
of the Republic of Turkey

For the Government of the
Union of Soviet Socialist
Republics

APPENDIX 3:

GEOGRAPHICAL COORDINATES OF BASEPOINTS CITED IN U.S.S.R. DECLARATION BY THE COUNCIL OF MINISTERS' JANUARY 15, 1985, DECREE 4450

Point Number	Geographic Position	Coordinates	
		North latitude	East longitude
1	Point where the state maritime boundary line between the U.S.S.R. and the Socialist Republic of Romania intersects the line connecting the eastern extremity of the northern entrance pier of the Sulinskiy Canal with the eastern islet of the Tsyganki Islands	45 10 51	29 45 56
2	Kubanskiy Island	45 19 31	29 45 58
3	Dal 'nyaya Spit, east coast	45 27 02	29 48 04
4	Spit to the south of Lake Shagany Further along the line of the lowest tide to point 5	45 40 15	29 52 59
5	Cape Laizheron	46 28 30	30 46 00
6	Cape to the east of Cape Severnyy Odesskiy Further along the line of the lowest tide to point 7	46 33 00	30 50 00
7	Cape Adzhiyask	46 36 00	31 21 04
8	Tendrovskaya Spit, northern extremity Further along the line of the lowest tide to point 9	46 22 06	31 31 36
9	Dzharylgach Island, southwest coast	46 01 40	32 47 00
10	Tarkhankut Peninsula, north coast Further along the line of the lowest tide to point 11	45 38 16	32 54 33
11	Cape Chernyy	45 35 09	32 49 21
12	Uzkaya Bay, western headland Further along the line of the lowest tide to point 11	45 31 24	32 41 39
13	Cape Priboynyy	45 23 25	32 28 52
14	Cape Takhankut Further along the line of the lowest tide to point 15	45 20 50	32 29 43
15	Cape Uret	45 19 00	32 39 24
16	To the northwest of Cape Yevpatoriyskiy Further along the line of lowest tide to point 17	45 12 12	33 08 48
17	Cape Yevpatoriyskiy	45 08 49	33 15 42

Point Number	Geographic Position	Coordinates	
		North latitude	East longitude
18	Cape Lukull	44 50 23	33 33 16
19	Cape Khersones Further along the line of the lowest tide to point 20	44 35 04	33 22 48
20	Cape Fiolent	44 29 52	33 29 24
21	Cape Ayya	44 25 05	33 40 18
22	Above-water stone off Cape Sarych	44 23 07	33 44 28
23	Cape Nikolaya	44 23 09	33 46 39
24	Cape Troitsy Further along the line ofthe lowest tide to point 25	44 23 31	33 56 37
25	Cape Opasnyy	44 24 20	34 02 01
26	Cape Aytodor	44 25 40	34 07 34
27	Cape Ayudag Further along the line of the lowest tide to point 28	44 32 55	34 20 58
28	Cape Chiken	44 48 58	34 53 50
29	Cape Meganom Further along the line of the lowest tide to point 30	44 47 32	33 04 53
30	Cape Tolstyy	44 49 23	35 07 51
31	Cape Kiik-Atlama	44 56 50	35 23 07
32	Cape Chauda Further along the line of the lowest tide to point 33	44 59 58	35 50 33
33	Cape to the east of Cape Chauda	45 00 46	35 57 19
34	Korabl'-Kamen Cliffs	45 00 28	36 10 26
35	Cape Kyz-Aul	45 03 32	36 22 33
36	Cape Zheleznyy Rog Further along the line of the lowest tide to point 37	45 06 36	36 44 42
37	Cape Myskhako	44 39 00	37 44 18
38	Cape Doob Further along the line of the lowest tide to point 39	44 37 57	37 54 24
39	Cape Tonkiy	44 33 36	38 01 40
40	Cape Tolstyy Further along the line of the lowest tide to the boundary with the Republic of Turkey	44 33 01	38 02 58

APPENDIX 4:

LENGTH OF SOVIET STRAIGHT BASELINES (nautical miles)

Points	Length
1-2	8.7
2-3	7.7
3-4	13.7
5-6	5.3
7-8	15.7
9-10	24.0
11-12	6.6
13-14	2.6
15-16	21.8
17-18	27.2
18-19	17.0
20-21	9.2
21-22	3.6
22-23	1.6
23-24	7.2
25-26	4.2
26-27	12.0
28-29	8.0
30-31	13.7
31-32	16.7
33-34	9.3
34-35	9.0
35-36	16.0
37-38	7.3
39-40	1.1

APPENDIX 5:

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SEE RELATED ADMIRALTY PUBLICATIONS: Notices to Mariners (recent, imminent and temporary changes), Sailing Directions (local conditions, directions, regulations, port information), List of Lights, List of Radio Signals (navigational warning and weather transmissions, pilot and port operations services, traffic management, radiobeacons), Tide Tables, Tidal Stream Atlases, The Mariner's Handbook (general information), 5011 (symbols and abbreviations), etc. ENSURE CHARTS AND PUBLICATIONS ARE KEPT CORRECTED.

U.S.S.R. STRAIGHT BASELINE CLAIM

Soviet Straight Baselines
Black Sea

Point Number	North Latitude	East Longitude
1	45° 10′ 51″	29° 45′ 56″
2	45° 19′ 31″	29° 45′ 58″
3	45° 27′ 02″	29° 48′ 04″
4	45° 40′ 15″	29° 52′ 59″
5	46° 28′ 30″	30° 46′ 00″
6	46° 33′ 00″	30° 50′ 00″
7	46° 36′ 00″	31° 21′ 04″
8	46° 22′ 06″	31° 31′ 36″
9	46° 01′ 40″	32° 47′ 00″
10	45° 38′ 16″	32° 54′ 33″
11	45° 35′ 09″	32° 49′ 21″
12	45° 31′ 24″	32° 41′ 39″
13	45° 23′ 25″	32° 28′ 52″
14	45° 20′ 50″	32° 29′ 43″
15	45° 19′ 00″	32° 39′ 24″
16	45° 12′ 12″	33° 08′ 48″
17	45° 08′ 49″	33° 15′ 42″
18	44° 50′ 23″	33° 33′ 16″
19	44° 35′ 04″	33° 22′ 48″
20	44° 29′ 52″	33° 29′ 24″
21	44° 25′ 05″	33° 40′ 18″
22	44° 23′ 07″	33° 44′ 28″
23	44° 23′ 09″	33° 46′ 39″
24	44° 23′ 31″	33° 56′ 37″
25	44° 24′ 20″	34° 02′ 01″
26	44° 25′ 40″	34° 07′ 34″
27	44° 32′ 55″	34° 20′ 58″
28	44° 48′ 58″	34° 53′ 50″
29	44° 47′ 32″	35° 04′ 53″
30	44° 49′ 23″	35° 07′ 51″
31	44° 56′ 50″	35° 23′ 07″
32	44° 59′ 58″	35° 50′ 33″
33	45° 00′ 46″	35° 57′ 19″
34	45° 00′ 28″	36° 10′ 26″
35	45° 03′ 32″	36° 22′ 33″
36	45° 06′ 36″	36° 44′ 42″
37	44° 39′ 00″	37° 44′ 18″
38	44° 37′ 57″	37° 54′ 24″
39	44° 33′ 36″	38° 01′ 40″
40	44° 33′ 01″	38° 02′ 58″

TURKEY—U.S.S.R. TERRITORIAL SEA AND CONTINENTAL SHELF BOUNDARIES AND U.S.S.R. STRAIGHT BASELINE CLAIM

SCALE 1:1,366,000

LEGEND

- TURKEY-U.S.S.R. CONTINENTAL SHELF BOUNDARY
- TURKEY-U.S.S.R. TERRITORIAL SEA BOUNDARY
- U.S.S.R. STRAIGHT BASELINE CLAIM
- 12-NAUTICAL MILE LIMIT

CAUTION

Users of this chart are cautioned that the position of Continental Shelf Boundary turning points and Soviet claimed base points may differ slightly when plotted on other charts due to differences of datum and spheroid between this chart and other charts used.

Permission by the British government to use this chart is gratefully acknowledged

THE EUXINE OR BLACK SEA

FROM THE RUSSIAN GOV^T SURVEYS.

With additions by the Surveyors to the European Commission on the River Danube.

All Bearings are True (thus:- 126° etc) and are given from Seaward. All Heights are expressed in feet above the level of the Sea. For Abbreviations see Admiralty Chart Nº 5011.

Natural Scale $\frac{1}{1,366,000}$

SOUNDINGS IN FATHOMS

CAUTION - MINE DANGER AREAS

The Soviet Naval Command recommends that ships sailing to Soviet ports in the Black Sea should be degaussed or wiped. For details of Mine Danger Areas and Recommended Routes through them, see the larger scale charts.

CAUTION REGARDING WRECKS

Owing to the comparatively small scale of this chart and in order to avoid confusion and overcrowding in the congested areas, numerous wrecks are omitted in the areas embraced by larger scale charts.

THIS CHART IS FOR ILLUSTRATIVE PURPOSES ONLY AND IS NOT TO BE USED FOR NAVIGATION

Small Corrections 1975-1849-1976-585-[19 3]-854-[29 8]-2328-2421-[30 11] 1978-1234-2010 1979-2441-2139-[3 10]-2454 1980-59-1464-2045-1981-1187-2335-1982-248-[26 1]-789-1205-1708-1834-2490-1983-323-518-1175-1813-2014-2640-1984-[21 2]-2671-1985-171-904-1384-2585-2985
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